

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE Group Art Unit 1626



In re

Patent Application of

David Edwin Thurston, et al.

Application No. 10/824,743

Confirmation No.: 7033

Filed: April 15, 2004

Examiner: Coppins, Janet L.

"COLLECTION OF COMPOUNDS"

INFORMATION DISCLOSURE STATEMENT PURSUANT TO 37 CFR §1.97(b)

Mail Stop Amendment Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

The Examiner's attention is directed to the references which are listed on the attached Form PTO/SB/08A and PTO/SB/08B and copies of non-U.S. patent references are attached.

Also, the Examiner's attention is directed to:

1. U.S. Patent Application Serial No. 09/763,767, filed 2/26/2001.

Examiner's Initials

Applicants request that the Examiner initial the above once considered.

Citation of these references is respectfully requested.

No concession is made that these documents are prior art, and Applicant expressly reserves the right to antedate the documents as may be appropriate.

Respectfully submitted,

Reg. No. 48,887

File No. 065435-9035

Michael Best & Friedrich LLP One South Pinckney Street P. O. Box 1806 Madison, WI 53701-1806 (608) 257-3501 1, Heather M. McGowen, hereby certify that this correspondence is being deposited with the US Postal Service as first class mail in an

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Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number. Complete if Known Application Number 10/824,743 INFORMATION DISCLOSURE Filing Date April 15, 2004 First Named Inventor STATEMENT BY APPLICANT **David Edwin Thurston** Group Art Unit (use as many sheets as necessary) **Examiner Name** Coppins, Janet L. 2 Attorney Docket Number Sheet of 065435-9035

	U.S. PATENT DOCUMENTS						
Examiner Initials	U.S. Patent Document Number	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document				
	3,523,941	Leimgruber et al.	8/11/1970				
	3,524,849	Batcho et al.	8/18/1970				
	4,185,016	Takanabe et al.	1/22/1980				
	4,239,683	Takanabe et al.	12/16/1980				
	4,309,437	Ueda et al.	1/5/1982				
	5,143,854	Pirrung et al.	9/1/1992				
	5,545,568	Ellman et al.	8/13/1996				
	6,747,144	Thurston et al.	6/8/2004				
	6,562,806	Thurston et al.	5/13/2003				
	6,608,192	Thurston et al.	8/19/2003				
	2003-0120069	Thurston et al.	6/26/2003				
	2003-0195196	Thurston et al.	10/16/2003				
	2004-0092736	Thurston et al.	5/13/2004				

		J	FOREIGN PATENT DOCUME	ENTS		
Examiner Initials	Country Code	Foreign Patent Document Number	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document	Translation	English Abstract
	wo	88/07378	Cancer Research Campaign Technology Ltd.	10/6/1988		
	wo	89/10140	Cancer Research Campaign Technology Ltd.	11/2/1989		
	wo	92/19620 D	Centre National de la Recherche Scientifique	11/12/1992		

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Substitute for fo	orm 1449/PTO	e,	i		Complete if Known	
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INFOR	MATION	N DISCLO	OSURE	Filing Date	April 15, 2004	
STATE	MENT B	Y APPL	ICANT	First Named Inventor	David Edwin Thurston	
				Group Art Unit	1626	
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			FOREIGN	PATENT DOCUME	NTS			
Examiner Initials	Country Code	Foreign Patent Document Number	1	me of Patentee or ant of Cited Document	Date of Publication Document	of Cited	Translation	English Abstract
	wo	93/08288	Cancer R Technolo	tesearch Campaign ogy Ltd.	4/29/1993			
	wo	93/18045	Cancer R Technolo	lesearch Campaign ogy Ltd.	9/16/1993			
	wo	97/01560 D	Pharmac	opeia, Inc.	1/16/1997			
	wo	00/12506		versity of Portsmouth ducation Corp.	3/9/2000			
	wo	00/12507		versity of Portsmouth ducation Corp.	3/9/2000			
	EP	0239400A2	Winter, C	G.P.	9/30/1987			-
	FR	2027356	Fujisawa Ltd.	Pharmaceutical Co.	12/29/1969		-	
	FR	2586683 D	Recherch	ational de la ne Scientifique	3/6/1987			
	GB	1299198 D	Ltd.	Pharmaceutical Co.	12/6/1972			
	JP	53-82792	Research		7/21/1978			
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Substitutephone	449B/PTO	e.	•		Complete if Known	
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	OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS
Examiner Initials	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.
	ALBERICIO, F. et al., "NPE-Resin, A New Approach to the Solid-Phase Synthesis of Protected Peptides and Oligonucleotides II. Synthesis of Protected Peptides ^{1,2} ," <i>Tetrahedron Letters</i> , 32:1515-1518 (1991)
	ALBERICIO, F. et al., "NPE-resin, a new approach to the solid-phase synthesis of protected peptides and oligonucleotides," <i>Peptides</i> 1990, Proc. 21.sub.st Eur. Pept. Symp., 134-136 (1990)
	ALTHIUS, T. H. and HESS, H. J., "Synthesis and Identification of the Major Metabolites of Prazosin Formed in Dog and Rat," J. Medicinal Chem., 20(1), 146-148 (1977)
	ARIMA et al., "Studies on Tomaymycin, a New Antibiotic. I. Isolation and Properties of Tomaymycin," J. Antibiotics, 25, 437-444 (1972)
	ARISTOFF, J and JOHNSON, P., "Synthesis of CBI-PDE-I-Dimer, the Benzannelated Analogue of CC-1065," J. Org. Chem., 57, 6234-6239 (1992)
	BAGSHAWE et al., "Antibody-Enzyme Conjugates Can Generate Cytotoxic Drugs from Inactive Precursors at Tumor Sites," Antibody, Immunoconjugates, and Radiopharmaceuticals, 4, 915-922 (1991)
	BARALDI, P.G. et al., "Design, synthesis and biological activity of a pyrrolo[2,1-c][1,4]benzodiazepine (PBD)-distamycin hybrid," <i>Bioorganic & Medicinal Chemistry Letters</i> , vol. 8, No. 21, 3019-3024 (1998)
	BARALDI, P.G. et al., "Synthesis, in Vitro Antiproliferative Activity, and DNA-Binding Properties of Hybrid Molecules Containing Pyrrolo[2,1-c][1,4]benzodiazepine and Minor-Groove-Binding Oligopyrrole Carriers," J. Med. Chem., 42, 5131-5141 (1999)
	BAYLEY, H. et al., "Photoactivatable drugs," TIPS, 8, 138-143 (1987)

Examiner	Date	
Signature	Considered	

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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	BERRY, J. M. et al., "Solid-phase synthesis of DNA-interactive pyrrolo[2,1-c][1,4]benzodiazepines," Tetrahedron Letters, 41, 6171-6174 (2000)
	BI, Y. et al., "Building blocks for peptide and carbamate libraries", <i>Bioorganic & Medicinal Chemistry Letters</i> , vol. 6, No. 19, 2299-2300 (1996)
	BI, Y., et al., "Building blocks for peptide and carbamate libraries," Chemical Abstracts, vol. 125, No. 23, 1013 (1996)
	BOGER et al., "CC-1065 and the Duocarmycins: Synthetic Studies," Chem. Rev., 97, 787-828 (1997)
	BOSE et al., "New Approaches to Pyrrolo[2,1-c][1,4]benzodiazepines: Synthesis, DNA-binding and cytotoxicity of DC-81," <i>Tetrahedron</i> , 48, 751-758 (1992)
	BOSE, D.S. et al., "Rational Design of a Highly Efficient Irreversible DNA Interstrand Cross-Linking Agent Based on the Pyrrolobenzodiazepine Ring System," J. Am. Chem. Soc., 114, 4939-4941 (1992)
	BRIDGES, R.J. et al., "Conformationally Defined Neurotransmitter Analogues. Selective Inhibition of Glutamate Uptake by One Pyrrolidine-2,4-dicarboxylate Diastereomer," J. Med. Chem., 34, 717-725 (1991)
	BROWN, S.C. et al., "NMR Solution Structure of a Peptide Nucleic Acid Complexed with RNA," Science, 265, 777-780 (1994)
	BUNDGAARD, H., "Design and Application of Prodrugs," A Textbook of Drug Design and Development, eds Krogsgaard-Lassen, P., and Bundgaard, H., Harwood Academic Press, 113-135 (1991)

Examiner	Date
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	BURGESS, K. et al., "Solid Phase Synthesis of Oligoureas", J.Ame. Chem. Soc., 119: 1556-1564 (1997)
	BURGESS, K et al., "Solid Phase Synthesis of Unnatural Biopolymers Containing Repeating Urea Units," Agnew Chem. Int. Ed. Engl, 34, No. 8:907-909 (1995)
	CARRUTH, J.A.S., "Clinical applications for photodynamic therapy," J. Photochem Photobiol., 9, 396-397 (1991)
	CHO, CY et al., "An Unnatural Biopolymer", Science, 261: 1303-1305 (1993)
	COURTNEY, S. M. et al., "A new convenient procedure for the synthesis of pyrrolo[2,1-c][1,4]benzodiazepines", Tetrahedron Letters, vol. 34, No. 33, 5327-28 (1993)
	CULVER et al., "In Vivo Gene Transfer with Retroviral Vector-Producer Cells for Treatment of Experimental Brain Tumors," Science, 256, 1550-1552 (1992)
	DALTON, S. and TREISMAN, R, "Characterization of SAP-1, a Protein Recruited by Serum Response Factor to the c-fos Serum Response Element," Cell, 68, 597-612 (1992)
	DAMAYANTHI, Y., et al., "Design and synthesis of novel pyrrolo {2,1-c][1,4] benzodiazepine-Lexitropsin Conjugates," J. Org. Chem., 64, 290-292 (1999)
	DANGLES, O. et al., "Selective Cleavage of the Allyl and Allyloxycarbonyl Groups through Palladium-Catalyzed Hydrostannolysis with Tributyltin Hydride. Application to the Selective Protection-Deprotection of Amino Acid Derivatives and in Peptide Synthesis," J. Org. Chem., 52, 4984-4993 (1987)

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_	DRESSMAN, B.A., et al., "Solid Phase Synthesis of Hydantoins Using a Carbamate Linker and a Novel Cyclization/Cleavage Step," <i>Tetrahedron Letters</i> , 37, 937-940 (1996)
	DROST, K.J. and CAVA, M.P., "A Photochemically Based Synthesis of the Benzannelated Analogue of the CC-1065 A Unit," J. Org. Chem., 56:2240-2244 (1991)
	EASHOO, M. et al., "Fibers from a Low Dielectric Constant Fluorinated Polyimide: Solution Spinning and Morphology Control," J. Polymer Science, 35:173-185 (1997)
	EDMAN, P. and BEGG, G., "A Protein Sequenator," Eur. J. Biochem., 1, 80-91 (1967)
	EGHOLM, M et al., "Peptide Nucleic Acids (PNA). Oligonucleotide Analogues with an Achiral Peptide Backbone," J. Am. Chem. Soc., 114, 1895-1897 (1992)
	EGHOLM, M et al., "PNA hybridizes to complementary oligonucleotides obeying the Watson-Crick hydrogen-bonding rules," <i>Nature</i> , 365, 566-568 (1993)
	ENGLEHARDT et al., "Direct gene transfer of human CFTR into human bronchial epithelia of xenografts with E1-deleted adenoviruses," Nature Genetics, 4, 27-34 (1993)
	FARMER, J.D. et al., "DNA binding properties of a new class of linked anthramycin analogs,", Chemical Abstracts, Abstract No. 239940r, vol. 114, No. 25, 25 899-903 (1991)
	FIGLIOZZI, G.M. et al., "Synthesis of N-substituted Glycine Peptoid Libraries," <i>Methods in Enzymology</i> , 267: 437-447 (1996)

Examiner	Date	
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	FOLOPPE, M.P. et al., "DNA-binding properties of pyrrolo[2,1-c][1,4]benzodiazephine N10-C11 amidines," Eur. J. Med. Chem., 31, 407-410 (1996)
	FUJISAWA PHARMACEUTICAL CO., LTD., Abstract No. 139983k, "Benzodiazepine derivatives", Chemical Abstracts, vol. 99, No. 17, 603 (1983)
	FUJISAWA PHARMACEUTICAL CO., LTD., Abstract No. 72145x, "Benzodiazepine derivatives", Chemical Abstracts, vol. 98, No. 9, 638 (1983)
	FUJISAWA PHARMACEUTICAL CO., LTD., "Benzodiazepine derivatives," SciFinder Scholar, 2-3 (2002)
	FUKUYAMA, T. et al., "Total Synthesis of (+)-Porothramycin B," Tetrahedron Letters, vol. 34, 16, 2577-2580 (1993)
	FURKA, A. et al., "General method for rapid synthesis of multicomponent peptide mixtures," Int. J. Peptide Protein Res., 37, 487-493 (1991)
	GARCIA-ECHEVERRIA, C., "A Base Labile Handle for Solid Phase Organic Chemistry", <i>Tetrahedron Letters</i> , 38,52, 8933-8934 (1997)
	GRANT, R. et al., Grant and Hackh's Chemical Dictionary, McGraw-Hill Book Company, 282 (1987)
	GREENE, T.W. and WUTS, P.G.M., Protective Groups in Organic Synthesis, John Wiley & Sons, 2 nd ed., Ch 7, 315-345 (1991)

Examiner	Date
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Sheet	6	of	14	Attorney Docket Number	065435-9035	

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	GREGSON, S. et al., "Synthesis of a novel C2/C2'-exo unsaturated pyrrolobenzodiazepine cross-linking agent with remarkable DNA binding affinity and cytotoxicity," <i>Chemical Communications</i> , 797-798 (1999)
	GREGSON, S.J. et al., "Design, Synthesis and Evaluation of a Novel Pyrrolobenzodiazepine DNA-Interactive Agent with Highly Efficient Cross-Linking Ability and Potent Cytotoxicity", J. Med. Chem., 44: 737-748 (2001)
	GREGSON, S.J. et al., "Effect of C2-exo Unsaturation on the Cytotoxicity and DNA-Binding Reactivity of Pyrrolo[2,1-c]1,4]benzodiazepines", Bioorganic & Medicinal Chemistry Letters, 10: 1845-1847 (2000)
	GUIOTTO, A. et al., "Synthesis of novel C7-aryl substituted pyrrolo[2,1-c][1,4]benzodiazepines (PBDs) via Pro-N10-troc protection and suzuki coupling," <i>Bioorganic & Medicinal Chemistry Letters</i> , 8, No. 21, 3017-3018 (1998)
	HARA et al., "DC 102, a new glycosidic pyrrolo(1,4)benzodiazepine antibiotic produced by streptomyces sp.", J. Antibiotics, 41, 702-704 (1988)
	HAUSKE, J. R. and DORFF, P., "Solid Phase CBZ Chloride Equivalent. A New Matrix Specific Linker", Tetrahedron Letters, 36, 10, 1589-1592 (1995)
	HOCART et al., "Highly potent cyclic disulfide antagonists of somatostatin," J. of Medicinal Chem., 42:11 (1999)
	HOCHLOWSKI, J. et al., "Abbeymycin, a new anthramycin-type antibiotic produced by a streptomycete," J. Antibiotics, 40, 145-148 (1987)
	HOLMES, C.P. and JONES, D.G., "Reagents for Combinatorial Organic Synthesis: Development of a New O-Nitrobenzyl Photolabile Linker for Solid Phase Synthesis", J. Org. Chem., 60, 2318-2319 (1995)

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HUBER, B. et al., "Retroviral-mediated gene therapy for the treatment of hepatocellular carcinoma: An innovative approach for cancer therapy," <i>Proc. Natl. Acad. Sci. USA</i> , 88, 8039-8043 (1991)
HURLEY, L. and NEEDHAM-VANDEVANTER, D., "Covalent Binding of Antitumor Antibiotics in the Minor Groove of DNA. Mechanism of Action of CC-1065 and the Pyrrolo(1,4)benzodiazepines," Acc. Chem. Res., 19, 230-237 (1986)
ITOH et al., "Sibanomicin, a new pyrrolo(1,4)benzodiazepine antitumor antibiotic produced by a micromonospora sp." J. Antibiotics, 41, 1281-1284 (1988)
JENKINS, T.C. et al., "Structure of a Covalent DNA Minor Groove Adduct with a Pyrrolobenzodiazepine Dimer: Evidence for Sequence-Specific Interstrand Cross-Linking," J. Med. Chem., 37, 4529-4537 (1994)
JUNGHEIM, L.N. and SHEPHERD, T.A., "Design of Antitumor Prodrugs: Substrates for Antibody Targeted Enzymes," Am. Chem. Soc. Chem. Rev., 94, 1553-1566 (1994)
KAMAL, A., et al., "An Efficient Synthesis of Pyrrolo[2,1-c][1,4] Benzodiazepine Antibiotics via Reductive Cyclization," <i>Bioorg. Med. Chem. Ltrs</i> , 7, No. 14, 1825-1828 (1997)
KAMAL, A., et al., "Synthesis of Pyrrolo [2,1-c][1,4]-Benzodiazepene Antibiotics: Oxidation of Cyclic Secondary Amine with TPAP", <i>Tetrahedron</i> , v. 53, No. 9, 3223-3230 (1997)
KAPOOR, T.M. et al., "Exploring the Specificity Pockets of Two Homologous SH3 Domains Using Structure-Based, Split-Pool Synthesis and Affinity-Based Selection," J. Am. Chem. Soc. 120:23-29 (1998)
KATRITZKY et al., Heterocyclic Chemistry, John Wiley & Sons, Inc., 247-253 (1960)

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	KENNEDY, J.C. and POTTIER, R.H., "Endogenous protoporphyrin IX, a clinical useful photosensitiser for photodynamic therapy," J. Photochem Photobiol, 14, 275-292 (1992)
	KOHN, K., "Anthramycin," Antibiotics III, Springer-Verlag, NY, 3-11 (1975)
	KONISHI, M. et al., "Chicamycin, a new antitumor antibiotic II. Structure determination of chicamycins A and B," J. Antibiotics, 37, 200-206 (1984)
	KUNIMOTO et al., "Mazethramycin, a new member of anthramycin group antibiotics," J. Antibiotics, 33, 665-667 (1980)
	KUNZ, H. and DOMBO, B., "Solid Phase Synthesis of Peptide and Glycopeptides on Polymeric Supports with Allylic Anchor Groups," Angew Chem. Int. Ed. Engl, 5, 711-713 (1988)
	KUZMICH, S. et al., "Increased levels of glutathione S-transferase π transcript as a mechanism of resistance to ethacrynic acid," <i>Journal of Biochemistry</i> , 281, 219-224 (1992)
	LANGLEY, D.R. and THURSTON, D.E., "A versatile and efficient synthesis of carbinolamine-containing pyrrolo[1,4]benzodiazepines via the cyclization of N-92-aminobenzoyl)pyrrolidine-2-carboxaldehyde diethyl thioacetals: total synthesis of prothracarcin," J. Org. Chem., 52, 91-97 (1987)
	LEBER, J.D. et al., "A revised structure for sibiromycin," J. Am. Chem. Soc., 110, 2992-2993 (1988)
	LEIMGRUBER, W. et al., "Isolation and characterization of anthramycin, a new antitumor antibiotic," J. Am. Chem. Soc., 87, 5791-5793 (1965)

Examiner	Date	
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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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STATE	EMENT B	Y APPL	ICANT	First Named Inventor	David Edwin Thurston	
				Group Art Unit	1626	
	(use as many she	ets as necessary))	Examiner Name	Coppins, Janet L.	
Sheet 9 of 14				Attorney Docket Number	065435-9035	

	OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS
Examiner Initials	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.
	LEIMGRUBER, W. et al., "The structure of anthramycin," J. Am. Chem. Soc., 87, 5793-5795 (1965)
	LEIMGRUBER, W. et al., "Total synthesis of anthramycin," J. Am. Chem. Soc., 90, 5641-5643 (1968)
	LESCRINIER, T. et al., "DNA-Binding Ligands from Peptide Libraries Containing Unnatural Amino Acids," Chem. Eur. J., 4, 3, 425-433 (1998)
	LEWIS A.D. et al., "Glutathione and glutathione-dependent enzymes in ovarian adenocarcinoma cell lines derived from a patient before and after the onset of drug resistance: intrinsic differences and cell cycle effects," <i>Carcinogenesis</i> , 9, 1283-1287 (1988)
	LOWN et al., "Molecular mechanism of binding of pyrrolo(1,4)benzodiazepine antitumour agents to deoxyribonucleic acid – anthramycin and tomaymycin," Biochem. Pharmacol. (1979), 28 (13), 2017-2026; and Abstract No. 51709
	MIZUSHIMA, S. and NAGATA, S., "pEF-BOS, a powerful mammalian expression vector," <i>Nucl. Acids Res.</i> , 18, 5322 (1990)
	MONKS, A. et al., "Feasibility of High-Flux Anticancer Drug Screen Using a Diverse Panel of Cultured Human Tumor Cell Lines," Journal of National Cancer Institute, 83, 757-766 (1991)
	MORAN, E.J. et al., "Novel Biopolymers for Drug Discovery: Biopolymers", <i>Peptide Science</i> , John Wiley and Sons, 37: 213-19 (1995)
	MORGAN, R.A. and ANDERSON, W.F., "Human Gene Therapy," Annu. Rev. Biochem., 62, 191-217 (1993)

Examiner	Date	
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	MOSMANN, T., "Rapid Colorimetric Assay for Cellular Growth and Survival: Application to Proliferation and Cytotoxicity Assays," J. Immunological Methods, 65, 55-63 (1983)
	MULLEN, D.G. and BARANY, G., "A New Fluoridolyzable Anchoring Linkage for Orthogonal Solid-Phase Peptide Synthesis: Design, Preparation, and Application of the N-(3 or 4)-[[4-(Hydroxymethyl) phenoxy]-tert-butylphenylsilyl]phenyl Pentanedioic Acid Monoamide (Pbs) Handle", J. Org. Chem., 53, 5240-5248 (1988)
	NAGASAKA, T. and KOSEKI, Y, "Stereoselective Synthesis of Tilivalline," Journal of Organic Chemistry, vol. 63, No. 20, 6797-6801 (1998)
	NAGASAKA, T. et al., "Stereoselective Synthesis of Tilivalline," Tetrahedron Letters, 30:14, 1871-1872 (1989)
	NICOLAOU, K.C. et al., "Designed Enediynes: A New Class of DNA-Cleaving Molecules with Potent and Selective Anticancer Activity," <i>Science</i> , 256, 1172-1178 (1992)
	NIELSON, P.E. et al., "Sequence-Selective Recognition of DNA by Strand Displacement with a Thymine-Substituted Polyamide," <i>Science</i> , 254, 1497-1500 (1991)
	O'NEIL, I.A., et al., "The Synthesis of Functionalized Pyrrolo-[2,1-c][1,4]-Benzodiazepines," Synlett, 75-78 (1997)
	O'NEIL, Chemical Abstract No. 171573p, "The synthesis of Functionalized Pyrrolo-[2,1-c][1,4]-Benzodiazepines", Chemical Abstracts, vol. 126, No. 13, 618 (1997)
	O'NEIL, I.A. et al., "DPPE: A Convenient Replacement for Triphenylphosphine in the Staudinger and Mitsunobu Reactions", <i>Tetrahedron Letters</i> , vol. 39, No. 42, 7787-7790 (1998)

Examiner	Dat	e
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PAIKOFF, S.J. et al., "The Solid Phase Synthesis of N-Alkylcarbamate Oligomers", <i>Tetrahedron Letters</i> , 37, No. 32: 5653-5656 (1996)						
PILLAI, V.N.R., "Photoremovable protecting groups in organic chemistry," Synthesis, 1-26 (1980)						
RAM, Z. et al., "In Situ Retroviral-mediated Gene Transfer for the Treatment of Brain Tumors in Rats," Cancer Research, 53, 83-88 (1993)						
RAWAL, V.H. et al., "Photocyclization Strategy for the Synthesis of Antitumor Agent CC-1065: Synthesis of Dideoxy PDE-I and PDE-II. Synthesis of Thiophene and Furan Analogues of Dideoxy PDE-I and PDE-II," J. Org. Chem., 52, 19-28 (1987)						
REGULA, J. et al., "Photosensitisation and photodynamic therapy of oesophagael, duodenal and colorectal tumours using 5-aminoleavulic acid induced photoporphyrin IX-a pilot study," <i>Gut</i> , 36, 67-75 (1995)						
SAGNOU, M.J. et al., "Design and Synthesis of Novel Pyrrolobenzodiazepine (PDB) Prodrugs for ADEPT and GDEPT," <i>Bioorganic & Medicinal Chemistry Letters</i> , 10, 2083-2086 (2000)						
SAHA, A.K. et al., "Diisopropylsilyl-Linked Oligonucleotide Analogs: Solid-Phase Synthesis and Physiocochemical Properties," <i>J. Org. Chem.</i> , 58, 7827-7831 (1993)						
SATYAM, A. et al., "Design, Synthesis, and Evaluation of Latent Alkylating Agents Activated by Glutathione S-Transferase," J. Med. Chem., 39, 1736-1747 (1996)						
SHIMIZU, K et al., "Prothracarcin, a Novel Antitumor Antibiotic," J. Antibiotics, 35, 972-978 (1982)						

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	SIMON, R.J. et al., "Peptoids: A Modular Approach to Drug Discovery", Proc. Natl. Acad. Sci. USA,89:9367-9371 (1992)
	SOTH, M.J. and NOWICK, J.S., "Unnatural oligomers and unnatural oligomer libraries", Curr. Opin. Chem. Biol., 1:120-129 (1997)
	STAR, W.M., "Light delivery and light dosimetry for photodynamic therapy," Lasers in Medical Science, 5:107-113 (1990)
	SUGGS, J.W. et al., "Synthesis and structure of anthramycin analogs via hydride reduction of dilactams," Tetrahedron Letters, 26, No. 40, 4871-4874 (1985)
	TAKEUCHI, T. et al., "Neothramycins A and B, New Antitumor Antibiotics," J. Antibiotics, 29, 93-96 (1976)
	TEW, K.D. and CLAPPER, M.L., "Glutathione-S-transferase and anti-cancer drug resistance," <i>Mechanism of Drug Resistance in Neoplastic Cells</i> , Woolley, P.V. and Tew, K.D., Eds, Academic Press: Sand Diego, CA 141-159 (1988)
	THURSTON, D.E. and THOMPSON, A.S., "The molecular recognition of DNA," Chem. Brit., 26, 767-772 (1990)
	THURSTON, D.E. and BOSE, D.S., "Synthesis of DNA-Interactive Pyrrolo[2,1-c][1,4]benzodiazepines," Chem. Rev., 94:433-465 (1994)
	THURSTON, D. E., "Advances in the study of Pyrrolo[2,1-c][1,4] benzodiazepine (PBD) Antitumour Antibiotics", Molecular Aspects of Anticancer Drug-DNA Interaction, Neidle, S. and Waring, M.J., Eds.; Macmillan Press Ltd, 1:54-88 (1993)

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	THURSTON, D.E. et al., "Effect of A-ring modifications on the DNA-binding behavior and cytotoxicity of pyrrolo[2,1-c][1,4]benzodiazepines", <i>Journal of Medicinal Chemistry</i> , 42:1951-1964 (1999)
	THURSTON, D.E. et al., "Synthesis of Sequence-selective C8-linked Pyrrolo [2,1-c][1,4] Benzodiazepine DNA Interstrand Cross-linking Agent," J. Org. Chem., 61:8141-8147 (1996)
	THURSTON, D.E. et al., "Synthesis of a novel GC-specific covalent-binding DNA affinity-cleavage agent based on pyrrolobenzodiazepines (PBDs),"Chemical Communications, 563-565 (1996)
	TSUNAKAWA, M. et al., "Porothramycin, a new antibiotic of the anthramycin group: Production, isolation, structure and biological activity," J. Antibiotics, 41:1366-1373 (1988)
	UMEZAWA, H. et al., Chemical Abstract No. 4427a, "Mazethramycins" Chemical Abstracts, vol. 90, No. 1, 428 (1979)
	UMEZAWA, H. et al., "Mazethramycins," SciFinder Scholar, 2-3 (2002)
	WILSON, S.C. et al., "Design and Synthesis of a Novel Epoxide-Containing Pyrrolo[2,1-c][1,4]benzodiazepine (PBD) via a New Cyclization Procedure," <i>Tetrahedron Letters</i> , 36, No. 35, 6333-6336 (1995)
	WILSON, S.C. et al., "Design, Synthesis, and Evaluation of a Novel Sequence-Selective Epoxide-Containing DNA Cross-Linking Agent Based on the Pyrrolo[2,1-c][1,4]benzodiazepine System", J. Med. Chem. 42:4028-4041 (1999)
	ZUCKERMAN, R.N. et al., "Discovery of Nanomolecular Ligands for 7-Transmembrane G-Protein-Coupled Receptors from a Diverse N-(Substituted) glycine Peptoid Library", J. Med. Chem., 37:2678-2685 (1994)

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